

CHAPTER 10A. GENERAL

Section 10A.01 Introduction

Support:

Part 10 provides standards and guidelines for the design, installation, and operation of traffic control devices at grade crossings of highway traffic and light rail transit vehicles to facilitate the reasonably safe, orderly, and integrated movement of all traffic. The principles in Section 8A.01 are the same but, because light rail vehicles sometimes operate along streets and highways in mixed traffic with automotive vehicles, the traffic controls and associated standards and guidelines for highway-light rail transit grade crossings presented in Part 10 can be different than those presented in Part 8.

Light rail transit is a mode of metropolitan transportation that employs light rail transit vehicles (commonly known as light rail vehicles, streetcars, or trolleys) that operate on rails in streets in mixed traffic, in semiexclusive rights-of-way, or in exclusive rights-of-way. Grade crossings with light rail transit can occur at intersections or at midblock locations, including public and private driveways.

An initial educational campaign along with an ongoing program to continue to educate new drivers is beneficial when introducing light rail operations to an area and, hence, new traffic control devices.

Light rail alignments can be grouped into one of the following three types:

- A. Exclusive: A light rail transit right-of-way that is grade-separated or protected by a fence or traffic barrier. Motor vehicles, pedestrians, and bicycles are prohibited within the right-of-way. Subways and aerial structures are included within this group. This type of alignment does not have grade crossings and is not further addressed in Part 10.
- B. Semiexclusive: A light rail transit alignment that is in a separate right-of-way or along a street or railroad right-of-way where motor vehicles, pedestrians, and bicycles have limited access and cross at designated locations only.
- C. Mixed-Use: An alignment where light rail transit operates in mixed traffic with all types of road users. This includes streets, transit malls, and pedestrian malls where the right-of-way is shared.

Standard:

Where light rail transit and railroads use the same tracks or adjacent tracks, the traffic control devices, systems, and practices for highway-rail grade crossings described in Part 8 shall be used.

Support:

Section 8A.01 contains a set of definitions, most of which also apply to Part 10.

Section 10A.02 Use of Standard Devices, Systems, and Practices

Support:

Because of the large number of significant variables to be considered, no single standard system of traffic control devices is universally applicable for all highway-light rail transit grade crossings.

Guidance:

The appropriate traffic control system to be used at a highway-light rail transit grade crossing should be determined by an engineering study conducted by the transit or highway agency in cooperation with other appropriate State and local organizations.

Standard:

Traffic control devices, systems, and practices shall be consistent with the design and application of the Standards contained herein.

The traffic control devices, systems, and practices described herein shall be used at all highway-light rail transit grade crossings.

Before any new highway-light rail transit grade crossing traffic control system is installed or modifications are made to an existing system, approval shall be obtained from the local agencies having statutory authority to grant such approval.

Guidance:

To stimulate effective responses from vehicle operators and pedestrians, these devices, systems, and practices should use the five basic considerations employed generally for traffic control devices and described fully in Section 1A.02: design, placement, operation, maintenance, and uniformity.

Support:

Many other details of highway-light rail transit grade crossing traffic control systems that are not set forth in Part 10 are contained in the publications listed in Section 1A.11.

Section 10A.03 Uniform Provisions

Standard:

All signs used in highway-light rail transit grade crossing traffic control systems shall be retroreflectorized or illuminated as described in Section 2A.08 to show the same shape and similar color to an approaching road user during both day and night.

No sign or signal shall be located in the center of an undivided highway, except in a raised island.

Guidance:

Such signs or signals should be installed with a clearance of at least 0.6 m (2 ft) from outer edge of the raised island to the nearest edge of the sign or signal, except as allowed in Section 2A.19.

Where the distance between tracks, measured along the highway between the inside rails, exceeds 30 m (100 ft), additional signs or other appropriate traffic control devices should be used.

Section 10A.04 Highway-Light Rail Transit Grade Crossing Elimination

Guidance:

Because highway-light rail transit grade crossings are a potential source of crashes and congestion, agencies should conduct engineering studies to determine the cost and benefits of eliminating these crossings.

Standard:

When a highway-light rail transit grade crossing is eliminated, the traffic control devices for the crossing shall be removed.

If the existing traffic control devices at a multiple-track highway-light rail transit grade crossing become improperly placed or inaccurate because of the removal of some of the tracks, the existing devices shall be relocated and/or modified.

Guidance:

Where a roadway is removed from a highway-light rail transit grade crossing, the roadway approaches in the light rail transit right-of-way should also be removed and appropriate signs should be placed at the roadway end in accordance with Section 3C.04.

Where light rail transit is eliminated at a highway-light rail transit grade crossing, the tracks should be removed or paved over.

Option:

Based on engineering judgment, the TRACKS OUT OF SERVICE (R8-9) sign (see Figure 10C-2) may be temporarily installed until the tracks are removed or paved over. The length of time before the tracks will be removed or paved over may be considered in making the decision as to whether to install the sign.

Section 10A.05 Temporary Traffic Control Zones

Support:

Temporary traffic control planning provides for continuity of operations (such as movement of traffic, pedestrians and bicycles, transit operations, and access to property/utilities) when the normal function of a roadway at a highway-light rail transit grade crossing is suspended because of temporary traffic control operations.

Standard:

Temporary traffic control operations on highways with highway-light rail transit grade crossings shall be as outlined in Part 6.

When a highway-light rail transit grade crossing exists either within or in the vicinity of a temporary traffic control zone, lane restrictions, flagging, or other operations shall not be performed in a manner that would cause vehicles to stop on the light rail transit tracks, unless a law enforcement officer or flagger is provided at the highway-light rail transit grade crossing to minimize the possibility of vehicles stopping on the tracks, even if automatic warning devices are in place.

Guidance:

The agencies responsible for the operation of the light rail transit and highway should be contacted when the initial planning begins for any temporary traffic control zone that may directly or indirectly influence the flow of traffic on mixed-use facilities where light rail transit and road users operate. Responsible agencies, along with others affected, such as emergency services and businesses, should meet to plan appropriate traffic detours and the necessary signing, marking, and flagging requirements for operations during temporary traffic control activities. Consideration should be given to the length of time that the grade crossing is to be closed, roadway classification, type of vehicle and traffic affected, the time of day, and the materials and techniques of repair.

Temporary traffic control operations should minimize the inconvenience, delay, and crash potential to affected traffic. Prior notice should be given to affected public or private parties, emergency services, businesses, and road users before the free movement of vehicles or light rail transit is infringed on or blocked.

Temporary traffic control activities should not be permitted to extensively prolong the closing of a grade crossing.

The width, grade, alignment, and riding quality of the highway surface at a light rail transit crossing should, at a minimum, be restored to correspond with the quality of the approaches to the highway-light rail transit grade crossing.

